

United States Environmental Protection Agency Office of Environmental Measurement & Evaluation 11 Technology Drive North Chelmsford, MA 01863-2431

Laboratory Results

November 13, 2017

Danielle Gaito - Mail Code OEP06-4 Evan Lewis - Mail Code OEP06-1 US EPA New England R1

Project No: 17100023

Project: Merrymeeting River - New Durham, NH

Analysis: Total Phosphorus in Water as P

EPA Chemist: Inna Germansderfer

Date Samples Received by the Laboratory: 10/19/2017

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-INGTP11.

The SOP is based on the Lachat Method 10-115-01-1-F and EPA method 365.1 "Determination of Phosphorous by Semi-Automated Colorimetry", Revision 2.0, August 1993 .

The method used for digestion of soil samples was developed at NERL.

Samples were analyzed on a Lachat Automated Ion Analyzer.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

If you have any questions please call me at 617-918-8340.

Sincerely,

Qualifiers: Page 2 of 6

- **RL** = Reporting limit
- **ND** = Not Detected above Reporting limit
- **NA** = Not Applicable due to high sample dilutions or sample interferences
- **NC** = Not calculated since analyte concentration is ND.
- J = Estimated value
- J1 = Estimated value due to MS recovery outside accceptance criteria
- **J2** = Estimated value due to LFB result outside acceptance criteria
- **J3** = Estimated value due to RPD result outside acceptance criteria
- **J4** = Estimated value due to LCS result outside acceptance criteria
- \mathbf{E} = Estimated value exceeds the calibration range
- L = Estimated value is below the calibration range
- **B** = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
- ${f R}={f No}$ recovery was calculated since the analyte concentration is greater than four times the spike level.
- **P** = The confirmation value exceeded 35% difference and is less than 100%. The lower value is reported.
- C =The identification has been confirmed by GC/MS.
- \mathbf{A} = Suspected Aldol condensation product.
- N =Tentatively identified compound.

US ENVIRONMENTAL PROTECTION AGENCY NEW ENGLAND LABORATORY

Merrymeeting River - New Durham, NH

Total Phosphorus in Water as P

Matrix: Water

Sample Number	Lab ID	Collected	Digested	Analysis	Concentration ug/L	RL ug/L	Qualifier
MM1 Comments:	AB70636	10/19/2017 10:35	10/24/2017	10/25/2017	7.6	5	
PM01 Comments:	AB70637	10/19/2017 10:42	10/24/2017	10/25/2017	34	5	
PM02 Comments:	AB70638	10/19/2017 10:58	10/24/2017	10/25/2017	72	5	
MM2 Comments:	AB70639	10/19/2017 11:13	10/24/2017	10/25/2017	34	5	
MM3 Comments:	AB70640	10/19/2017 11:26	10/24/2017	10/25/2017	14	5	
DUP Comments:	AB70641	10/19/2017 0:00	10/24/2017	10/25/2017	7.0	5	
Blank Comments:			10/24/2017	10/25/2017	ND	5	

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Merrymeeting River - New Durham, NH

MATRIX SPIKE (MS) Results

		SPIKE	SAMPLE	MS	MS	QC
		ADDED	CONCENTRATION	CONCENTRATION	%	LIMITS
SAMPLE ID	PARAMETER	ug/L	ug/L	ug/L	REC	(% REC)
AB70639	Total Phosphorus in Water as P	97.8	34	125	93.0	85 - 115

Comments:

MATRIX SPIKE DUPE (MSD) RESULTS

SAMPLE ID	PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION ug/L	MSD % REC	RPD %	QC LIMITS RPD
AB70639	Total Phosphorus in Water as P	97.8	125	93	0	20

Comments:

Laboratory Duplicate Results

CAMPLEID	DAD AMETER	SAMPLE RESULT	SAMPLE DUP RESULT	PRECISION RPD	QC LIMITS
SAMPLE ID	PARAMETER	ug/L	ug/L	%	(%RPD)
AB70639	Total Phosphorus in Water as P	34	35	3	20

US ENVIRONMENTAL PROTECTION AGENCY NEW ENGLAND LABORATORY

Merrymeeting River - New Durham, NH

Laboratory Fortified Blank (LFB) Results

PARAMETER	LFB AMOUNT	LFB	LFB	QC
	SPIKED	RESULT	RECOVERY	LIMITS
	ug/L	ug/L	%	%
Total Phosphorus in Water as P	97.8	97.2	99.4	90 - 110

Samples in Batch: AB70636, AB70637, AB70638, AB70639, AB70640, AB70641

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